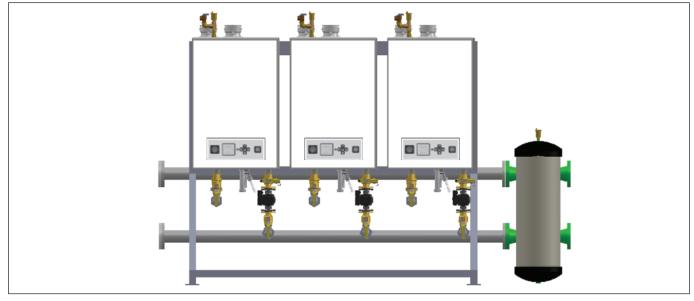




# Prestige Cascade System CPS1200 Primary Secondary



### **Engineering Submittal Data**

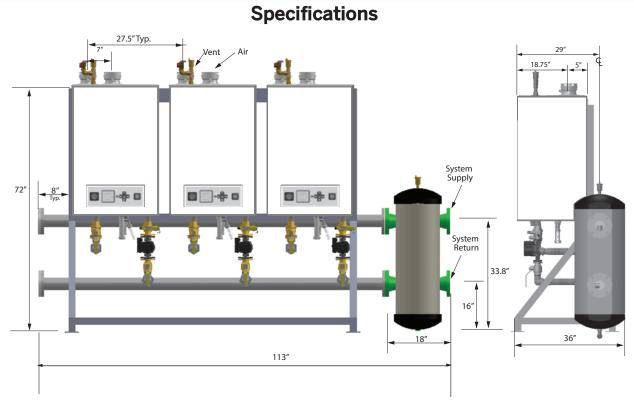
- Distribution Manifold for (3) Prestige Solo 399 Boilers
- The Distribution Manifold Includes:
  - 3" ANSI Flange Connections with Gaskets and Hardware
  - Blind Flanges
  - 3" ANSI to 3" NPSC Flanges
  - Heavy-Duty Concrete Anchors & Bolts
  - Flexible Stainless Steel Connecting Hoses for Easy Boiler Connections
  - Boiler Communication Cables
  - System Temperature Sensor
- Primary Secondary Piping Assemblies
  - Individual Boiler Shut Off Valves
  - Individual Boiler Drain/Shut Off Valves
  - Individual Circulator Isolation Valves
- Individual Flanged Boiler Circulators
  - 3 Speed Grundfos UPS-26-99FC with Flow Check
  - Gaskets & Hardware
- Hydronic Junction for
  - System Separation
  - Air Elimination with Vent
  - Dirt Separation
  - Drain Valve
  - Insulated
  - 3" ANSI Flange Connections

#### **Optional Equipment**

- PSCAS17 CSD-1 Kit (1 Kit per Boiler is Required)
  - Probe Type Low Water Cut-Off Field Wired to Boiler for Manual Reset
  - Boiler High Temperature Limit Control Field Wired to Boiler for Manual Reset
  - Drywell for Boiler High Temperature Limit Control
  - Required Pipe Fittings
- PSVKIT03 Concentric Vent/Air Side Wall Kit (1 Kit per Boiler)
- PSVKIT02 Stainless Steel Vent/Air Side Wall Termination Kit for 2 pipe PVC/CPVC System (1 Kit per Boiler)
- PSVTERM05 PVC Vent/Air Side Wall Termination Kit for 2 Pipe PVC/CPVC System (1 Kit per Boiler)
- PSVKIT05 Three Boiler Common Vent Near Boiler Piping Kit (1 required)
- PSVTERM01 Vertical Common Vent Termination
- PSVTERM02 Horizontal Common Vent Termination

#### **Engineering Submittal - CPS 1200**





| Cascade<br>Kit P/N | # of<br>Manifolds | # of<br>Solo 399<br>Boilers | Total<br>Input<br>MBH<br>Note 1 | Total<br>Output<br>MBH<br>Note 1 & 2 | Total<br>Net IBR<br>Rating<br>MBH<br>Note 3 | Total<br>EDR<br>Water<br>Ft 2<br>Note 4 | Total<br>Output<br>Boiler<br>Horse-<br>Power | Minimum<br>Recommended<br>System<br>Pipe Size<br>Note 5 | Minimum<br>Recommended<br>Natural Gas<br>Header Size<br>Note 6 |
|--------------------|-------------------|-----------------------------|---------------------------------|--------------------------------------|---|---|--|---|--|
| CPS 1200           | 1                 | 3                           | 72.5 - 1,197                    | 1,138                                | 990   | 6,599                                   | 34.0   | 4″  | 2.5″   |

**Note1:** Input and output ratings are shown for sea level applications. The PRESTIGE Solo 399 automatically derates the input at approximately 2% for every 1,000 feet of altitude. No alteration to the boiler or burner system is required.

**Note 2:** PRESTIGE Solo 399 output rating is based off a thermal efficiency of 95.1%. PRESTIGE Solo 399 combustion efficiency is 94.1%

**Note 3:** The IBR rating is based on piping and pick up allowance of 1.15. This allowance should be sufficient for standard radiation requirements.

Note 4: Equivalent Direct Radiation (EDR) is based on 150 Btu/h per square foot at 170°F average supply temperature.

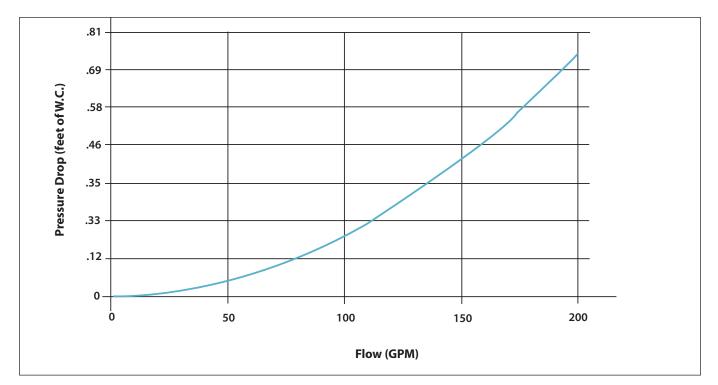
Note 5: Minimum recommended system iron pipe size is based on temperature differential of 20°F.

**Note 6:** Minimum recommended natural gas header size is based on using schedule 40 metallic pipe with 0.30" w.c. pressure drop and 100 feet of total equivalent length.

| Component         | Individual<br>Water<br>Content<br>Gal | Individual<br>Shipping<br>Weight<br>Lbs |
|-------------------|---------------------------------------|---|
| Prestige 399      | 7.4                                   | 225                                     |
| 3 Boiler Manifold | 9.3                                   | 326                                     |
| Hydronic Junction | 8                                     | 124                                     |

| Cascade<br>Kit P/N | Total<br>Water<br>Content<br>Gal. | Total<br>Shipping<br>Weight<br>Lbs |  |  |
|--------------------|-----------------------------------|------------------------------------|--|--|
| CPS 1200           | 40                                | 1,355                              |  |  |





## Hydronic Junction System Pressure Drop Curve

| Project / Location             | Date |  |  |  |  |
|--------------------------------|------|--|--|--|--|
| Consulting Engineer/ Architect |      |  |  |  |  |
| Mechanical Contractor          |      |  |  |  |  |
| Notes                          |      |  |  |  |  |
|                                |      |  |  |  |  |